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November 19, 2018

Commercial Energy Consumers Association of British Columbia
c/o Owen Bird Law Corporation
P.O. Box 49130
Three Bentall Centre
2900 – 595 Burrard Street
Vancouver, BC
V7X 1J5

Attention: Mr. Christopher P. Weafer

Dear Mr. Weafer:

Re: FortisBC Energy Inc. (FEI)

Project No. 1598970

2019 and 2020 Revenue Requirements and Rates Application for the Fort Nelson Service Area (the Application)

Response to the Commercial Energy Consumers Association of British Columbia (CEC) Information Request (IR) No. 1

On September 4, 2018, FEI filed the Application referenced above. In accordance with the British Columbia Utilities Commission Order G-171-18 setting out the Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to CEC IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Commission Secretary
Registered Parties

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1 **1. Reference: Exhibit B-1, page 12**

Table 2-3: Total Annual Bill Impacts for Average Customers (incl. RDA, RRA, and RSAM)⁸

Rate Schedule	GJ	2019		2020	
		Annual \$ Increase	% of Previous Annual Bill	Annual \$ Increase	% of Previous Annual Bill
Rate Schedule 1 Residential Service	125	\$ 48	6.26%	\$ 48	5.80%
Rate Schedule 2 Small Commercial Service	350	\$ (18)	(0.71%)	\$ 154	6.24%
Rate Schedule 3 Large Commercial Service	3,165	\$ (1,271)	(6.60%)	\$ 1,041	5.78%
Rate Schedule 25 General Firm Transportation Service	41,500	\$ 6,842	4.16%	\$ 13,009	7.60%

As shown in Table 2-3 above, the total bill impacts to be experienced by the individual Rate Schedules are less than 10 percent in each year of 2019 and 2020 when combining both the RDA decision and the 2019/2020 Revenue Requirements. As discussed in the RDA Decision, Elenchus Research Associates Inc. (Elenchus), an independent consultant retained by the Commission staff in FEI's 2016 RDA, observed that a common threshold for defining a rate/bill increase that constitutes rate shock is a double-digit increase (i.e. 10 percent or more)⁹. Since the total bill impact to be experienced by each Rate Schedule, including Residential, is less than 10 percent in each year for 2019 and 2020, FEI is not proposing any mitigation mechanism to

⁷ Annual bills shown in Table 2-2 do not include RSAM Rate Rider

⁸ The 2019 RSAM Rate Rider 5 included in the total bill impact calculations is proposed to be \$0.199 per GJ (as outlined in Section 3.4), which is a decrease of \$0.192 per GJ from the 2018 RSAM Rate Rider 5 of \$0.391 per GJ. For 2020, the RSAM rate rider used for the total bill impact calculation equals the proposed 2019 RSAM Rider 5 rate rider of \$0.199 per GJ; therefore the bill impacts represent no change in the RSAM rate rider.

⁹ Commission Order G-135-18 and Decision, page 57

2

3 1.1 Please confirm that the 'rate shock' definition of a double-digit increase would
4 apply to a single year, and does not carry over to double digit increases occurring
5 over 2 or more years.

6

7 **Response:**

8 Confirmed. In Section 2.3 of the Elenchus Research Associates Inc. (Elenchus) Rate Design
9 Report for FEI's 2016 Rate Design Application (RDA), dated June 23, 2017¹, which the BCUC
10 referenced in the RDA Decision under BCUC Order G-135-18, Elenchus stated: "*Rate shock is*
11 *an important concept that constrains the pace at which the rates for specific classes, or specific*
12 *customers within a class, are increasing in a single year.*" [Emphasis added]

13

¹ https://www.b cuc.com/Documents/Proceedings/2017/DOC_49522_A2-10_Elenchus-Rate-Design-Report.pdf

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1 2. **Reference: Exhibit B-1, page 13 and 14**

Table 2-4: Comparison between FEI and FEFN Delivery Rates^{11,12}

	FEI Proposed Rate (2019)	Fort Nelson Proposed Rates (2019)	Difference	FN/FEI	Fort Nelson Proposed Rates (2020)	Difference	FN/FEI
Rate Schedule 1							
Basic Charge/Day	\$ 0.3890	\$ 0.3701	\$ (0.0189)		\$ 0.3701	\$ (0.0189)	
Delivery Charge/GJ	\$ 4.370	\$ 3.712	\$ (0.658)		\$ 4.093	\$ (0.277)	
Annual Usage (GJ)	125	125			125		
Effective Rate/GJ	\$ 5.51	\$ 4.79	\$ (0.71)	(13%)	\$ 5.17	\$ (0.33)	(6%)
Rate Schedule 2							
Basic Charge/Day	\$ 0.8161	\$ 1.2151	\$ 0.3990		\$ 1.2151	\$ 0.3990	
Delivery Charge/GJ	\$ 3.523	\$ 3.996	\$ 0.473		\$ 4.435	\$ 0.912	
Annual Usage (GJ)	349	349			349		
Effective Rate/GJ	\$ 4.38	\$ 5.27	\$ 0.89	20%	\$ 5.71	\$ 1.33	30%
Rate Schedule 3							
Basic Charge/Day	\$ 4.3538	\$ 3.6845	\$ (0.6693)		\$ 3.6845	\$ (0.6693)	
Delivery Charge/GJ	\$ 2.939	\$ 3.492	\$ 0.553		\$ 3.821	\$ 0.882	
Annual Usage (GJ)	3,164	3,164			3,164		
Effective Rate/GJ	\$ 3.44	\$ 3.92	\$ 0.48	14%	\$ 4.25	\$ 0.80	23%
Rate Schedule 25							
Admin Charge/Mth	\$ 78.00	\$ 39.00			\$ 39.00		
Basic Charge/Mth	\$ 587.00	\$ 600.00			\$ 600.00		
Demand Charge/GJ/Mth	\$ 20.077	\$ 31.785	11.708		\$ 34.449	14.372	
Delivery Charge/GJ	\$ 0.825	\$ 1.053	0.228		\$ 1.141	0.316	
Contract Demand	293	293			293		
Annual Usage (GJ)	41,500	41,500			41,500		
Effective Rate/GJ	\$ 2.72	\$ 3.93	\$ 1.21	45%	\$ 4.24	\$ 1.53	56%

2

As shown above, the proposed Fort Nelson residential customers' effective delivery rate for 2019 and 2020, including the impact of the RDA Decision and the 2019/2020 RRA, continues to be lower than FEI's residential customers' delivery rates. However, the effective delivery rates for commercial and industrial customers will be higher than FEI's commercial and industrial customers. For instance, commercial customers in Fort Nelson with annual consumption less than 2,000 GJ (Rate Schedule 2, formerly Rate 2.1) will have effective delivery rates approximately 20 percent and 30 percent higher than FEI in 2019 and 2020, respectively; commercial customers with annual consumption greater than 2,000 GJ (Rate Schedule 3, formerly Rate 2.2) will have effective delivery rates approximately 14 percent and 23 percent high than FEI in 2019 and 2020, respectively; and industrial customers in Fort Nelson under Rate Schedule 25 will have effective delivery rates 45 percent and 56 percent higher than FEI in 2019 and 2020, respectively.

3

4 2.1 Please provide a brief discussion of the underlying reasons behind the relatively
5 higher commercial and industrial rates when compared to FEI postage stamp
6 rates, particularly in light of the lower residential rates. Please also provide the
7 R:C ratios for each rate class.

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Response:

The review, calculation and rebalancing of Residential, Commercial and Industrial rates for Fort Nelson was recently included in FEI's 2016 Rate Design Application (RDA) for which Orders G-4-18 and G-135-18 were received on January 9, 2018 and July 20, 2018, respectively. The RDA included a Cost of Service Allocation Study (COSA) for both FEI and FEFN. In brief, the purpose of the COSA is to allocate the utility's costs to its customer groups and to compare the allocated costs with the revenues received from those customer groups (Revenue divided by Costs (R:C ratio)). If the R:C ratio is within a certain range, the customer group is deemed to be paying its fair share of the utility's costs.

The FEFN COSA allocates approximately 50 percent of the Utility's costs to the Commercial and Industrial customer groups whereas the FEI COSA allocates approximately 37 percent of the Utility's costs to the Commercial and Industrial customer groups; consequently, FEFN's Commercial and Industrial customer groups pay a greater portion of the utility's costs when compared to the same customer groups in FEI.

The following table illustrates the R:C ratio for each Rate Schedule in FEFN after rate design proposals and rebalancing².

Rate Schedule	R:C
RS 1	95.9%
RS 2	105.0%
RS 3	105.0%
RS 25	95.0%

Order G-4-18 includes a directive for FEI to file a comprehensive COSA study for FEFN five years after the release of the RDA decision (July 20, 2018). At the time that this COSA study is completed FEI will make a determination as to whether rebalancing between rate classes should be proposed.

2.2 Does FEI expect to conduct rebalancing between rate classes for FEI Fort Nelson at some point in the future? Please explain why or why not.

² FortisBC Energy Inc., 2016 Rate Design Application, Volume 5 – Consolidated Updated Application, February 6, 2018.

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1 **Response:**

2 Please refer to the response to CEC IR 1.2.1.

3

4

5

6 2.2.1 If yes, please advise when this is expected to occur.

7

8 **Response:**

9 Please refer to the response to CEC IR 1.2.1.

10

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1 **3. Reference: Exhibit B-1, page 24 and 25**

The Conference Board of Canada (CBOC) housing starts forecast provides a proxy for Fort Nelson's residential customer additions. The year over year growth rate is calculated for 2019 to 2020 based on the CBOC Provincial Medium Term forecast on January 19, 2018, Table 156 and Table 157. The CBOC Provincial Medium Term forecast is provided in Appendix A1.

4.4.1 Residential Customer Additions

As shown in Figure 4-2 below, FEFN has experienced negative net customer additions in both 2016 and 2017. In the absence of the Prophet River Extension, and based on the CBOC forecast, FEFN would have forecasted a further loss of 18 customers in 2019. However, the addition of 53 customers from PRFN temporarily reverses the trend in 2019. In 2020, the forecast is once again based solely on the CBOC predictions and the net additions are forecast to be negative.

2

3 3.1 Please provide any other sources of information for housing starts that could be
4 substituted for the CBOC forecast.

5

6 **Response:**

7 FEI believes that the separate single and multi-family forecasts provided by the current CBOC
8 forecast are important features of the current method and cannot be replaced. As the housing
9 market continues to transition towards more multi-family dwellings it is important to capture this
10 transition in the forecast of customer additions. FEI is not aware of an alternative that provides
11 this required information.

12

13

14

15 3.2 Are there other significant linkages other than housing starts that would be
16 relevant to predicting customer growth? If yes, please provide.

17

18 **Response:**

19 FEI is not aware of any other linkages that would result in an improved forecast for residential
20 customer additions. When the additions forecast is small (-20 to +50 range) and volatile, as it is
21 for FEFN, all methods will be susceptible to high variances. FEI also notes that customer
22 additions in any one year have a small impact on the annual demand forecast.

23

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4. Reference: Exhibit B-1, Appendix A2 page 3

Table A2-3: FEFN Demand Variances

Rate Schedule 1 - Residential										
Forecast	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Actual	291,154	272,606	263,045	258,951	273,297	274,309	270,571	268,635	267,546	261,825
Error = (ACT-FCST)	268,169	266,370	271,367	267,722	269,235	270,062	267,589	265,419	262,275	251,350
Percent Error = (Error/ACT)	(22,985)	(6,236)	8,322	8,771	(4,063)	(4,247)	(2,982)	(3,216)	(5,271)	(10,475)
	-8.6%	-2.3%	3.1%	3.3%	-1.5%	-1.6%	-1.1%	-1.2%	-2.0%	-4.2%
Rate Schedule 2.1 - Small Commercial										
Forecast	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Actual	209,910	186,312	181,641	182,772	203,246	207,927	208,999	208,315	208,642	211,897
Error = (ACT-FCST)	184,532	191,342	193,609	205,891	205,024	204,488	203,517	222,697	221,733	214,211
Percent Error = (Error/ACT)	(25,378)	5,030	11,968	23,119	1,778	(3,440)	(5,482)	14,382	13,091	2,314
	-13.8%	2.6%	6.2%	11.2%	0.9%	-1.7%	-2.7%	6.5%	5.9%	1.1%
Rate Schedule 2.2 - Small Commercial										
Forecast	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Actual	96,042	87,957	94,774	94,774	101,063	104,320	109,660	115,656	120,843	96,570
Error = (ACT-FCST)	88,281	94,378	94,669	96,842	100,065	109,821	106,168	64,924	55,081	48,357
Percent Error = (Error/ACT)	(7,761)	6,421	(105)	2,068	(998)	5,502	(3,492)	(50,732)	(65,762)	(8,213)
	-8.8%	6.8%	-0.1%	2.1%	-1.0%	5.0%	-3.3%	-78.1%	-119.4%	-17.0%
Commercial										
Forecast	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Actual	305,952	274,269	276,415	277,547	304,309	312,247	318,658	323,972	329,485	268,467
Error = (ACT-FCST)	272,813	285,721	288,278	302,734	305,089	314,309	309,685	287,621	276,814	262,568
Percent Error = (Error/ACT)	(33,139)	11,452	11,863	25,187	780	2,062	(8,973)	(36,351)	(52,672)	(5,899)
	-12.1%	4.0%	4.1%	8.3%	0.3%	0.7%	-2.9%	-12.6%	-19.0%	-2.2%
Rate Schedule 25 - General Firm Transportation										
Forecast	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Actual	276,063	239,795	58,492	58,492	54,995	54,995	67,084	55,832	49,000	39,685
Error = (ACT-FCST)	209,955	68,982	54,995	51,354	55,832	60,756	67,598	49,790	41,110	41,847
Percent Error = (Error/ACT)	(66,108)	(170,813)	(3,496)	(7,138)	837	5,761	515	(6,042)	(7,890)	2,162
	-31.5%	-247.6%	-6.4%	-13.9%	1.5%	9.5%	0.8%	-12.1%	-19.2%	5.2%
Total Demand										
Forecast	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Actual	873,169	786,670	597,952	594,989	632,602	641,551	656,313	648,439	646,031	569,978
Error = (ACT-FCST)	750,937	621,072	614,641	621,809	630,155	645,127	644,872	602,830	580,199	555,765
Percent Error = (Error/ACT)	(122,232)	(165,598)	16,689	26,820	(2,447)	3,576	(11,441)	(45,609)	(65,832)	(14,212)
	-16.3%	-26.7%	2.7%	4.3%	-0.4%	0.6%	-1.8%	-7.6%	-11.3%	-2.6%

4.1 Rate Schedule 1 (Residential) has experienced consistent over-forecasting for 8 of the last 10 years shown, and for all 6 of the last 6 years. Please comment on what steps, if any, FEFN is taking to improve its forecasting methodologies for the residential rate class.

Response:

This response also addresses CEC IRs 1.4.2, 1.5.2, 1.5.4, 1.5.6 and 1.6.2.

FEI believes the current forecast methods remain appropriate. By applying a trend to, or averaging, the most recent data, annual fluctuations are minimized and smoothed out. Smoothing techniques such as trending and averaging are common and well-established practices to minimize year-over-year fluctuations.

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FEI has been investigating an alternative forecasting method called Exponential Smoothing (ETS), as discussed in the response to BCUC IR 1.2.1. To date, the aggregate results have not been materially better than those from the existing methods.

While the residential demand variances have been negative more often than positive, the actual magnitude of the variances has been very low. Using the standard MAPE (mean absolute percent error) calculation, the 10-year average error is only 2.9 percent. This compares very favorably with the industry average of 4 percent, based on the annual ITRON survey. In addition, the absolute variance in five of the last six years has been 2 percent or less.

The ten-year demand MAPE for the commercial classes is higher at 6.6 percent. A significant uptick in the demand of Rate Schedule 2.2 in 2015 and 2016 was mostly driven by the completion of a large development project in Fort Nelson that had a negative impact on this variance. The commercial demand has now stabilized and FEI expects the variance will return to lower levels. FEI notes that the commercial demand was over-forecast five times and under-forecast five times in the last ten years and is not aware of ways to improve this balance.

FEI expects that its load will continue to be influenced by many factors that may have affected load variances in the past, including customer behavior, economic activity, DSM, government policies (such as environmental policy), new technology, housing formations, etc. The current methods fully account for all these intrinsic factors and together result in long term forecast performance that FEI believes is reasonable for a utility of this size.

FEI believes the current forecast performance is reasonable and has some evidence to date that different forecast methods would not have materially improved on these results.

4.2 Commercial rate schedules have experienced over-forecasting for 5 of the last 10 years shown, and for all of the last 4 years. Please comment on what steps, if any, FEFN is taking to improve its forecasting methodologies for the commercial rate class, particularly the small commercial rate class 2.2 which experiences the most significant variances.

Response:

Please refer to the response to CEC IR 1.4.1.

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4.3 Please identify all the ways in which FEFN's demand forecasting directly and indirectly impacts its O&M expenditures in a given year, and over 5 years and 10 years.

Response:

The demand forecast does not affect actual O&M expenditures. With respect to forecast O&M, the forecast of FEFN customers used in the demand forecast is a component in calculating the allocation factor used to allocate forecast O&M costs from the FEI departments that provide functional support to FEFN. This allocation of forecast O&M, called the shared service fee, is included in the total O&M forecast for FEFN.

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1 **5. Reference: Exhibit B-1, page 27 and Appendix A2 page 3**

4.5 USE RATES (RESIDENTIAL AND COMMERCIAL CUSTOMERS)

FEI developed individual UPC forecasts for each rate schedule by considering the recent (three year) historical weather-normalized use per account. See Appendix A3 for a more detailed description of FEI's UPC forecast methods.

The Rate Schedule 1 UPC is forecast to continue to decline through the Test Period as seen in Figure 4-4 below.

2

Table A2-4: FEFN UPC Variances

Rate Schedule 1 - Residential	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Forecast	149	140	136	133	140	140	138	136	135	133
Actual	140	138	141	138	139	139	137	136	134	130
Error = (ACT-FCST)	(9)	(2)	5	5	(1)	(1)	(1)	(1)	(1)	(3)
Percent Error = (Error/ACT)	-6.6%	-1.2%	3.6%	3.5%	-1.1%	-1.0%	-0.8%	-0.5%	-0.4%	-2.6%

Rate Schedule 2.1 - Small Commercial	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Forecast	503	474	435	435	466	465	463	453	437	444
Actual	449	464	468	476	465	460	456	482	466	448
Error = (ACT-FCST)	(54)	(10)	34	41	(1)	(5)	(7)	29	29	4
Percent Error = (Error/ACT)	-12.0%	-2.1%	7.2%	8.6%	-0.3%	-1.1%	-1.6%	6.1%	6.1%	0.8%

Rate Schedule 2.2 - Small Commercial	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Forecast	3,312	3,157	3,385	3,385	3,609	3,726	3,487	3,535	3,699	8,081
Actual	3,137	3,371	3,388	3,326	3,228	3,555	3,425	6,616	7,869	8,086
Error = (ACT-FCST)	(175)	214	3	(59)	(381)	(171)	(62)	3,081	4,169	4
Percent Error = (Error/ACT)	-5.6%	6.3%	0.1%	-1.8%	-11.8%	-4.8%	-1.8%	46.6%	53.0%	0.1%

3

4 5.1 Rate Schedule 1 (Residential) has experienced consistent over-forecasting for 8
5 of the last 10 years shown, and for all 6 of the last 6 years. Please comment on
6 why FEFN believes its UPC forecasts have been consistently high for RS 1.

7

8 **Response:**

9 FEI relies on objective, time series forecasting methods for the preparation of short-term (one to
10 two year) forecasts. FEI's objective methods are well-defined and use historical data to produce
11 point forecasts assuming trends that are present in the historical data will continue. If those
12 trends do not continue, or if other factors become more relevant, then the point forecasts will
13 demonstrate variances. All time series methods are subject to the same issues. As there is
14 significant variability in the historical data, it is reasonable to expect similar variability in the
15 forecasts.

16 However, FEI believes the current methods remain appropriate. By applying a trend to, or
17 averaging, the most recent data, annual fluctuations can be minimized and smoothed out.
18 Smoothing techniques such as trending and averaging are common and well-established
19 practices to minimize year-over-year fluctuations.

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FEI expects that its load in FEFN will continue to be influenced by many factors that may have affected load variances in the past, including customer behavior, economic activity, DSM, government policies (such as environmental policy), new technology, housing formations, etc. The current methods fully account for all these intrinsic factors and together result in long term forecast performance that is better than the industry average.

5.2 Please discuss what steps FEFN is taking, if any, to improve its UPC forecasting methodologies for the residential rate class.

Response:

Please refer to the response to CEC IR 1.4.1.

5.3 Please provide FEFN's views on why the RS 2.1 UPC has been declining since 2015.

Response:

Please refer to the response to BCUC IR 1.3.1.

5.4 Commercial rate schedules experienced significant under forecasting of its UPC for 2015 and 2016, with over forecasting for several other years. Please comment on why FEFN believes its UPC forecasts appear to have variable accuracy.

Response:

Please refer to the FEI's response to CEC IR 1.4.1.

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5.5 What caused the significant increase in UPC in RS 2.2 between the years 2015 and 2017? Please explain.

Response:

The largest of the Rate 2.2 customers began taking service in 2015 and completed the final phase of their project in 2017, resulting in the increase in UPC for Rate 2.2. FEI expects that this customer’s demand will begin to stabilize as the project is now complete.

5.6 Please comment on what steps FEFN is taking to improve its UPC forecasting methodologies for the commercial rate class, particularly the small commercial rate class 2.2 which experiences the most significant variances.

Response:

Please refer to the response to CEC IR 1.4.1.

5.7 Please provide FEFN’s views on why the residential UPC rates have been steadily declining since 2008.

Response:

Please refer to the response to BCUC IR 1.3.1.

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1 **6. Reference: Exhibit B-1, Appendix A2 page 4**

Table A2-6: FEFN Customer Additions Variances

Rate Schedule 1 - Residential	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Forecast	45	9	10	10	11	13	12	13	13	1
Actual	(3)	-	12	18	8	12	3	1	(18)	(18)
Error = (ACT-FCST)	(48)	(9)	2	8	(3)	(1)	(9)	(12)	(31)	(19)
Percent Error = (Error/ACT)	1600.0%		16.7%	44.4%	-37.5%	-8.3%	-300.0%	-1200.0%	172.2%	105.6%

Rate Schedule 2.1 - Small Commercial	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Forecast	13	3	3	2	11	11	11	11	11	2
Actual	6	(2)	9	26	4	3	-	28	4	(2)
Error = (ACT-FCST)	(7)	(5)	6	24	(7)	(8)	(11)	17	(7)	(4)
Percent Error = (Error/ACT)	-116.7%	250.0%	66.7%	92.3%	-175.0%	-266.7%		60.7%	-175.0%	200.0%

Rate Schedule 2.2 - Large Commercial	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Forecast	(1)	-	-	-	-	-	1	1	1	-
Actual	(2)	-	-	3	-	-	-	(24)	-	(1)
Error = (ACT-FCST)	(1)	-	-	3	-	-	(1)	(25)	(1)	(1)
Percent Error = (Error/ACT)	50.0%			100.0%				104.2%		100.0%

2

3 6.1 Please correct the Percent Error calculations in the above tables where there
4 was a negative Actual and negative Error, in order to consistently demonstrate
5 the direction of the error. For example, RS 1 2008 Percent Error should read (-
6 1600%) not 1600%.

7

8 **Response:**

9 The Percent Error shown in Table A2-6 of the Application is calculated correctly. As per section
10 3 of Appendix A2, the Percent Error calculation is defined as:

11
$$PE_t = \frac{(Y_t - F_t)}{Y_t} \times 100$$

12 Y_t is the actual customer additions and F_t is the forecast of customer additions.

13 This definition has been applied correctly to Table A2-6. The direction of the error can be
14 obtained from the fourth row in each table. Making the sign of the Percent Error row match the
15 sign of the error would require manual intervention on a year-by-year basis and would violate
16 the formula above. Such an alteration would also result in a definition inconsistent with other FEI
17 filings.

18 Graphically the percentage error is calculated as follows:

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Variance Calculation



1
2 In this case because both the Actual and Error are “red” implies that the sign of the Percent
3 Error should be positive.

4
5
6
7 6.2 Please discuss FEFN’s plans, if any, to improve its customer additions
8 forecasting for the Residential and Commercial rate schedules.

10 **Response:**

11 Please refer to the response to CEC IR 1.4.1.

12

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1 **7. Reference: Exhibit B-1, page 37**

Table 4-3: 2017-2020 Other Revenue Components (\$000s)

	Approved 2017	Actual 2017	Approved 2018	Projected 2018	Forecast 2019	Forecast 2020
Late Payment Charge	17	14	17	13	13	12
Application Charge	9	7	9	8	5	5
Other Recoveries	-	-	-	-	-	-
Total Other Operating Revenue	26	21	26	21	18	17

2

3 7.1 Why does FEFN expect that 'Application Charges' will decline from a steady
4 figure of between 7-9 to 5 in F2019 and F2020? Please explain.

5

6 **Response:**

7 The reduced forecasts of Application Charge for FEFN in 2019 and 2020 are a result of the
8 approved amendments to FEI's General Terms and Conditions (GT&Cs), which also applies to
9 FEFN, in the RDA Decision. As discussed in Section 2.2 and Section 4.8 of the Application, the
10 2016 RDA Decision (Order G-135-18) approved amendments to FEI's GT&Cs which reduced
11 the Application Charge from \$25 to \$15 as part of the Standard Fees and Charges Schedule.

12

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8. Reference: Exhibit B-1, page 41

6.3 FORECAST O&M

Table 6-1 below provides a combined resource view of the direct and allocated O&M costs for the years 2017 through 2020. The O&M forecasts for 2019 and 2020 were determined in accordance with the methodology described above.

Table 6-1: O&M Resources Required for FEFN (\$ thousands)

Particulars	2017 Approved	2017 Actual	2018 Approved	2018 Projected	2019 Forecast	2020 Forecast
M&E Costs	\$ 19	\$ 25	\$ 19	\$ 18	\$ 19	\$ 19
IBEW Costs	330	132	338	364	327	331
Labour Costs	349	157	357	382	346	350
Vehicle Costs	44	22	45	43	44	45
Employee Expenses	29	13	30	20	20	20
Materials and Supplies	8	8	8	8	8	8
Fees and Administration Costs	526	495	536	508	540	535
Contractor Costs	21	20	21	21	21	22
Facilities	41	32	42	34	36	37
Recoveries & Revenue	(2)	(2)	(2)	(2)	(2)	(2)
Non-Labour Costs	667	588	680	632	667	665
Total Gross O&M Expenses	1,016	745	1,037	1,014	1,013	1,015
Less: Capitalized Overhead	(122)	(122)	(124)	(124)	(121)	(122)
Total O&M Expenses	\$ 894	\$ 623	\$ 913	\$ 890	\$ 892	\$ 893

The 2017 Actual is lower compared to 2017 Approved, primarily due to an IBEW employee being on medical leave worth approximately \$40 thousand, an amount of approximately \$70 thousand for standby labour that was inadvertently excluded from the 2017 O&M, and lower than anticipated maintenance activities undertaken.

The 2018 Projected includes a true-up of \$70 thousand for 2017 Actual standby labour. Excluding this amount, the 2018 Projected is forecast to be lower than the 2018 Approved as one of the full-time IBEW employees was cross training in other areas outside of Fort Nelson during the first half of the year.

6.3.1.2 Employee Expenses

The 2019 and 2020 employee expenses are forecast to be the same as 2018 Projected. The 2018 Projected is lower than 2018 Approved due to lower than expected requirements for travel-related training for the two full-time IBEW employees and reduced Prince George Operations management team travel to FEFN. The 2017 Actual employee expenses are lower than 2017 Approved primarily due to an IBEW employee being on medical leave and reduced management team travel to FEFN.

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8.1 Please provide an additional 3 years of historical information in the above table.

Response:

Please see below the updated Table 5-1 that includes 2014 to 2016 Actuals.

Table 5-1: O&M Resources Required for FEFN (\$ thousands)

Particulars	2014 Actual	2015 Actual	2016 Actual	2017 Approved	2017 Actual	2018 Approved	2018 Projected	2019 Forecast	2020 Forecast
M&E Costs	\$ 15	\$ 18	\$ 19	\$ 19	\$ 25	\$ 19	\$ 18	\$ 19	\$ 19
COPE Costs	7								
IBEW Costs	326	320	294	330	132	338	364	327	331
Labour Costs	348	338	313	349	157	357	382	345	350
Vehicle Costs	42	38	40	44	22	45	43	44	45
Employee Expenses	15	18	32	29	13	30	20	20	20
Materials and Supplies	14	8	5	8	8	8	8	8	8
Fees and Administration Costs	493	521	508	526	495	536	508	540	535
Contractor Costs	17	31	23	21	20	21	21	21	22
Facilities	39	16	24	41	32	42	34	36	37
Recoveries & Revenue	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Non-Labour Costs	620	630	628	667	588	680	632	668	665
Total Gross O&M Expenses	968	969	941	1,016	745	1,037	1,014	1,013	1,015
Less: Capitalized Overhead	(130)	(118)	(120)	(122)	(122)	(124)	(124)	(122)	(122)
Total O&M Expenses	\$ 838	\$ 851	\$ 821	\$ 894	\$ 623	\$ 913	\$ 890	\$ 892	\$ 893

8.2 The IBEW Actual costs were approximately \$200,000 lower than Approved in 2017. Please confirm or otherwise explain that the 'lower than anticipated maintenance activities' amounted to approximately \$90,000.

Response:

Please refer to the response to BCUC IR 1.5.3.

8.3 Please describe the 'lower than anticipated maintenance activities' and discuss why they were anticipated, but were not required.

Response:

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1 Please refer to the response to BCUC IR 1.5.3.

2

3

4

5 8.4 Does FEFN need to reschedule any maintenance activities in the future, or have
6 these activities been undertaken or covered in plans for 2019-2020? Please
7 explain.

8

9 **Response:**

10 Please refer to the response to BCUC IR 1.5.3.

11

12

13

14 8.5 Please provide an estimate of the costs that were foregone as a result of the
15 IBEW employee cross training and identify the costs for each category where
16 they were reduced.

17

18 **Response:**

19 Approximately \$25 thousand for labour and \$5 thousand vehicle-related costs were estimated to
20 be foregone in 2018 for the IBEW employee cross training in other areas.

21

22

23

24 8.6 Please explain why the 2018 Projected IBEW costs were higher than approved in
25 2018, and include a discussion of why this occurred when an IBEW employee
26 was cross training outside of FEFN during the first half of the year.

27

28 **Response:**

29 As discussed in Section 6.3.1.1 of the Application, the 2018 Projected IBEW cost includes a
30 true-up of \$70 thousand for standby labour. Excluding this amount, the 2018 Projected IBEW
31 costs were \$294 thousand, which is approximately \$44 thousand lower than the 2018 Approved
32 due to one full-time IBEW employee cross training outside of FEFN for part of the first half of the
33 year and lower projected labour costs for specialized pressure control technicians supporting
34 FEFN.

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1 **9. Reference: Exhibit B-1, page 42**

6.3.1.4 Fees and Administration Costs

For 2019, of the \$540 thousand forecasted fees and administration costs, \$528 thousand is the shared service fee, approximately \$1 thousand is related to FEFN's allocation of FEI's 2019-2022 DSM Expenditures application costs, and approximately \$8 thousand is related to the legal fees for the purchase of the Prophet River Extension and the remainder is for miscellaneous administration expenses. Please refer to Section 10 for further details related to the Prophet River Extension. The 2019 forecast shared service fee is increased by \$24 thousand from the 2018 Projected amount of \$504 thousand.

For 2020, of the \$535 thousand forecasted fees and administration costs, \$531 thousand is the shared service fee, which is a further \$3 thousand increase from the 2019 forecast.

2

3 9.1 Please explain why 'Fees and Administration costs' were approximately \$30,000
4 lower in the 2018 Projected than Approved.

5

6 **Response:**

7 The lower 2018 projected Fees and Administration costs are mainly attributable to a lower
8 shared service fee. The shared service fee is projected to be lower than the approved by
9 approximately \$28 thousand in 2018 due to a decrease in the shared service allocation factor
10 from 0.244 percent to 0.236 percent. The decrease in the allocation factor is due to changes in
11 the 2018 projected average number of customers for FEI and FEFN, and a lower 2018
12 Projected Gross O&M for FEI compared to the approved used in the allocation. The calculation
13 is shown below.

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(\$000s)	2018 Forecast	2018 Projected
FEI Gross O&M ¹	273,555	268,328
Less: O&M not subject to allocation ²	<u>55,716</u>	<u>54,735</u>
O&M Allocation Base	217,839	213,593
Multiplied by Allocation Factor	<u>0.00244</u>	<u>0.00236</u>
Shared Services Fee	<u>532</u>	<u>504</u>
Average Number of Customers		
FEFN	2,445	2,394
FEI	<u>997,798</u>	<u>1,011,481</u>
Total	<u>1,000,243</u>	<u>1,013,875</u>
Allocation Factor (FEFN/Total)	<u>0.00244</u>	<u>0.00236</u>

¹ The 2018 Forecast Gross O&M used in the allocation is the 2017 Forecast Gross O&M inflated by the formula factor.

² The 2018 Projected Gross O&M is the sum of Actual/Projected Gross O&M of \$270,212 from Table 10-2 of the FEI 2019 Annual Review and Projected Bio-methane O&M Transferred to BVA credit of \$1,884.

³ These are Distribution common costs that do not provide functional support to Fort Nelson and accounted for as direct costs.

9.2 Why are the Fees and Administration costs only decreased by \$5000 between F2019 and F2020 when the Prophet River Extension legal fees will be removed?

Response:

Contributing to the net decrease in Fees and Administration costs of \$5 thousand between F2019 and F2020 were:

- A decrease of approximately \$8 thousand for the removal of the Prophet River Extension legal fees;
- An increase of approximately \$3 thousand for an increase in the shared service fee in the 2020 Forecast.

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10. Reference: Exhibit B-1 page 46

Table 8-1: Rate Base (amounts in \$000s)

	Approved 2017	Actual 2017	Approved 2018	Projected 2018	Forecast 2019	Forecast 2020
Net Plant in Service, Mid-Year	10,793	11,138	11,019	11,340	11,610	11,894
Adjustment to 13 - Month Average	-	(42)	-	-	-	-
Work in Progress, No AFUDC	35	121	35	121	121	121
Unamortized Deferred Charges	297	376	126	198	130	21
Cash Working Capital	37	30	34	44	44	45
Other Working Capital	14	24	14	27	27	27
Utility Rate Base	\$ 11,176	\$ 11,648	\$ 11,228	\$ 11,730	\$ 11,932	\$ 12,108

The growth in rate base for the forecast period is largely attributable to capital additions. Each of the main components of rate base (plant balances, deferral accounts, and working capital) is discussed separately below.

8.2 NET PLANT IN-SERVICE (NPIS)

The mid-year NPIS balance of \$11,610 thousand in 2019 and \$11,894 thousand in 2020 per Table 8-1 above is the sum of the mid-year average of the gross plant in-service, contributions in aid of construction (CIAC), and accumulated depreciation and amortization related to these two items.

10.1 Why were FEFN's Projected Net Plant in Service, and Utility Rate Base significantly higher than the 2018 Approved. Please explain.

Response:

The primary reasons the 2018 Projected Utility Rate Base is higher than the 2018 Approved by approximately \$502 thousand are as follows:

- A higher mid-year Net Plant In-Service (NPIS) in 2018 Projected than 2018 Approved by approximately \$321 thousand for reasons explained further below;
- A higher 2018 Projected Work in Progress, no AFUDC than 2018 Approved by approximately \$86 thousand. This amount represents construction work in progress for projects that are shorter than three months in duration and less than \$100 thousand. The 2018 Projected Work in Progress of \$121 thousand is higher than the 2018 Approved because the 2018 Projected amount was based on 2017 Actual while the 2018 Approved amount was based on 2015 Actual which was used for the 2017 & 2018 FEFN RRA filed in 2016;

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- A higher 2018 Projected unamortized deferred charges than 2018 Approved by approximately \$72 thousand. The reason that the 2018 Projected is higher than 2018 Approved is primarily due to the balances in those deferral accounts that capture variances from forecasts, including the Revenue Stabilization Adjustment Mechanism (RSAM) deferral account. FEI does not forecast variances in these accounts because the assumption in developing the forecasts is that they will be realized and there will be no variances.

The higher than approved 2018 Projected mid-year NPIS was primarily due to the replacement of steel distribution mains and services and general plant that took place in 2016. Due to the use of a two-year test period for FEFN revenue requirement applications, there can be a historical difference between projections and actuals that do not become apparent until a following revenue requirement application. The 2018 Projected mid-year NPIS was based on the closing balance of the 2017 Actual which in turn was based on the closing balance of the 2016 Actual, while the 2018 Approved mid-year NPIS was based on the closing balance of 2017 Approved as filed in the 2017/2018 FEFN RRA in 2016 which in turn was based on the closing balance of 2016 Projected plant in-service at that time. The 2016 Actual had higher plant additions than the 2016 Projected at that time primarily due to the replacement of steel distribution mains and services and general plant.

- 10.2 The 2018 Approved Utility rate base was more than \$400,000 lower than the 2017 actual, and only marginally higher than the 2017 Approved. Please discuss.

Response:

The 2018 Approved being lower than the 2017 Actual is due to the same timing issue discussed in the response to CEC IR 1.10.1. As noted there, the higher 2016 actual expenditures were not reflected in the 2018 Approved since they were not known at the time of approval.

FEI notes that the increase from 2017 Actual to 2018 Projected (i.e., \$82 thousand) compares well with the increase from 2017 Approved to 2018 Approved (i.e., \$52 thousand), indicating that the 2018 changes were consistent even though the 2017 actual rate base starting point is higher.

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11. Reference: Exhibit B-1, page 47

Table 8-2: Summary of Gross Plant Additions (\$000s)²²

	Approved 2017	Actual 2017	Approved 2018	Projected 2018	Forecast 2019	Forecast 2020
Intangibles	46	74	46	46	28	28
Transmission	75	54	15	15	5	5
Distribution	307	302	388	399	575	463
General	50	50	50	50	41	41
Total	478	480	499	510	649	537

For 2017 and 2018 combined, capital additions were generally in line with amounts approved (Approved was \$977 thousand and Actual/Projected is \$990 thousand) with a variance of approximately 1.3 percent.

8.2.1.1 Intangible Plant

As approved in FEI's Annual Review for 2016 Rates²³, FEI is allocating Intangible capital costs to FEFN as of 2017. The amount of the allocation to FEFN's Intangible Plant in 2019 and 2020 is \$28 thousand, related to the purchase and sustainment of System Computer Software.

Please elaborate on the reduction of 'intangibles' from \$46,000 (2017 Approved and 2018 Projected and Approved) to \$28,000 in F2019 and F2020 and how this relates to a purchase and sustainment of System Computer Software.

11.1 Has FEFN been able to achieve quantifiable savings from its System Computer Software? If yes, for how long does FEFN expect these savings to continue?

Response:

While responding to this IR, FEI found that the forecasted amounts for 2019 and 2020 under Intangibles should have been \$44 thousand and \$46 thousand, respectively. When allocating the Intangible capital costs to FEFN, FEI used incorrect costs as a basis for the allocation. This resulted in lower overall costs being allocated to FEFN. FEI will correct this oversight with an Evidentiary Update to include the correct portion of the total Intangible capital expenditures to FEFN.

Since FEFN is a service area of FEI and the majority of services provided to FEFN are provided by FEI, quantifiable savings realised in FEI are passed through to FEFN through the cost allocation mechanism. Both the shared services allocation and the allocation of assets (Intangible assets in this case) will pass through quantifiable savings in FEI to FEFN.

FEI has been able to achieve quantifiable savings, and has outlined quantifiable IS related savings in Section 1 of its Annual Review for 2019 Rates Application, including a review of its

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1 Technical and Infrastructure Support Provider, the Online Service Application (OSA) initiative
2 and SAP Integration. FEI expects that these savings should last 5 – 8 years as this is the useful
3 life of software.

4
5
6
7 11.2 If yes, did FEFN make an IT&T or other capital expenditure to create these
8 savings? Please explain and provide quantification.
9

10 **Response:**

11 Please refer to the response to CEC IR 1.11.1.
12

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12. Reference: Exhibit B-1, page 47

Table 8-2: Summary of Gross Plant Additions (\$000s)²²

	Approved 2017	Actual 2017	Approved 2018	Projected 2018	Forecast 2019	Forecast 2020
Intangibles	46	74	46	46	28	28
Transmission	75	54	15	15	5	5
Distribution	307	302	388	399	575	463
General	50	50	50	50	41	41
Total	478	480	499	510	649	537

8.2.1.2 Transmission Plant

The forecast additions to transmission plant in 2019 and 2020 are forecasted to be less than prior years' capital expenditures.

Large projects that were identified and initiated in the period of 2015 and 2016, such as the replacement of transmission pipeline valves (2017 - \$169 thousand), are being completed in 2017 and 2018²⁴.

For 2019 and 2020, there are no significant projects planned with only minor cathodic protection issues intended to be addressed. The forecasted cost of this work is \$10 thousand with \$5 thousand in 2019 and \$5 thousand in 2020.

12.1 Please provide a brief elaboration on the completed projects and rationalize the 2017-\$169,000 figure in the text with the figures in Table 8-2.

Response:

While responding to this information request, FEI discovered that it inadvertently did not account for transmission projects that were underway at the time the Application was being prepared. After correcting for projects underway, the 2018 Projected and 2019 Forecast for Transmission plant addition should have been \$193 thousand and \$22 thousand, respectively. FEI will correct this oversight with an Evidentiary Update to include the correct Transmission plant additions for 2018 projected and 2019 forecast as well as an updated Table 8-2.

Table 8-2 of the Application is a summary of gross plant additions to rate base while the statement in Section 8.2.1.2 of the Application as shown in the preamble above is regarding capital expenditures in 2017 and 2018 that are related to specific projects. Due to business processes, there is a time delay between when expenditures occur and when they become additions to rate base. The "replacement of transmission pipeline valves (2017 - \$169 thousand)" relates to a project initiated in 2016 with expenditures following in 2017 and 2018. This project was the justification for the \$75 thousand approved for transmission in 2017. Construction difficulties were encountered which delayed the completion of the project.

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1 Expenditures of approximately \$169 thousand were incurred in 2017. As the project has not
2 been completed, it was not recorded as gross plant additions in 2017.

3 The 2018 Projected amount of \$193 thousand includes the 2017 expenditures of \$169 thousand
4 discussed above plus \$4 thousand incurred in 2016 and \$20 thousand incurred in 2018. The
5 2019 Forecast amount of \$22 thousand includes \$17 thousand for projects that were initiated in
6 previous years and are expected to enter rate base in 2019.

7

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1 **13. Reference: Exhibit B-1, page 47 and page 48**

Table 8-2: Summary of Gross Plant Additions (\$000s)²²

	Approved 2017	Actual 2017	Approved 2018	Projected 2018	Forecast 2019	Forecast 2020
Intangibles	46	74	46	46	28	28
Transmission	75	54	15	15	5	5
Distribution	307	302	388	399	575	463
General	50	50	50	50	41	41
Total	478	480	499	510	649	537

Table 8-3: Summary of Capital Additions for Distribution Assets (\$000s)

	Forecast 2019	Forecast 2020
Growth related Distribution Capital	23	28
Muskwa Gate Station Telemetry	163	-
Recreation Centre District Station Valve Replacement	-	74
Replacement of Steel Distribution Mains and Services	243	319
PRFN Project	104	-
Misc Sustainment Capital	42	42
Total	575	463

13.1 Why are capital additions for Distribution significantly higher for 2019 and F2020 than they have been in past years? Please explain.

Response:

Capital additions for Distribution are higher for 2019 and 2020 than they have been in past years, in particular prior to 2017 and 2018, due to the station upgrade at the Muskwa Gate Station, FEEN's proactive replacement of portions of the Steel Distribution Mains and Services, and the PRFN Project.

For cost effectiveness, improvements at stations are generally not undertaken in a piecemeal fashion. If improvements can be combined to address other issues that have arisen then, overall, the cost of addressing all at the same time will be lower than if they were mitigated one at a time. However, as a result, significant upgrades to stations will occur on an infrequent basis, and when they become necessary the cost of the work creates peaks in the forecast and expenditures. The Muskwa Gate Station project in 2019 and the Recreation Centre District Station project in 2020 are representative of this type of infrequent expenditure.

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There is an increase in expenditures proposed for the replacement of Steel Distribution Mains and Services due to resources becoming available to plan and execute the work and the need to complete the program over a reasonable period of time. As work on transmission assets is forecast to be much less during 2019 and 2020, FEI's focus is now directed to the distribution assets.

The PRFN Project is a one-time expenditure in 2019 related to the PRFN extension as discussed in Section 10 of the Application. No similar expenditure is forecasted for the future.

13.2 Does FEFN typically attempt to smooth its capital additions over time? Please explain why or why not.

Response:

To the extent possible, FEI does attempt to smooth FEFN capital additions over time to provide a manageable level of capital work for the resources available, and to smooth the impact on customer rates. However, as discussed in the response to CEC IR 1.13.1, improvements at stations such as the Muskwa Gate Station Project and Recreation Centre District Station Project, as listed in Table 8-3 for 2019 and 2020 respectively, will occur on an infrequent basis which can lead to variances year over year.

13.3 Does FEFN expect that its Distribution Gross Plant Additions will return to a lower level over the next five year after F2020? Please explain why or why not and provide quantification of the forecast changes that FEFN expects to see in the future.

Response:

FEI expects that, on average, its Distribution Gross Plant Additions to remain at the currently proposed levels over the next five years after 2020.

Although the PRFN Project is a one-time expenditure, FEI plans to continue the targeted Replacement of Steel Distribution Mains and Services for a further eight years, including 2019 and 2020, as discussed in BCUC IR 1.10.3.

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1 In addition, FEI has identified the following two projects that it will be considering in the future,
2 although the exact time-frame has not been determined:

- 3 • Installation of YZ Odorizer System at Fort Nelson Gate Station – Estimated to be \$270
4 thousand over three years; and
- 5 • Installation of Telemetry at Fort Nelson Gate Station – Estimated to be \$135 thousand
6 over three years.

7

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1 **14. Reference: Exhibit B-1, page 49**

The forecast additions to distribution plant in 2019 and 2020 include:

- Growth related distribution capital (new mains, new services, and new meters) which is forecasted to be \$23 thousand in 2019 and \$28 thousand in 2020. Growth capital investments are incurred to install gas mains, services and meters to attach new customers;
- Upgrades to the Muskwa Gate Station consisting of telemetry to remotely monitor the operation of the station; a new line heater burner management system with industry standard safety features for achieving regulatory compliance, improving reliability, and combustion efficiency; a new station grounding to meet updated industry standards (\$163 thousand in 2019);
- Replacement of an under-rated valve at the Recreation Centre District Station to ensure an adequate safety factor (\$74 thousand in 2020);
- The proactive replacement of steel distribution mains and services to address those that are prone to leaks, and due to their location in Fort Nelson, of greater risk to public safety due to longer periods of frozen ground and remoteness from emergency repair personnel (\$243 thousand in 2019 and \$319 thousand in 2020). These are similar expenditures to those incurred and forecasted for 2017 and 2018;
- Installation of individual gas meters to approximately 59 homes and business in PRFN, relocate services as necessary, and conduct work to ensure the distribution system meets FEI safety standards. The capital cost for this work which is included as part of 2019 capital additions is approximately \$104 thousand. This work is depended upon FEI receiving a CPCN approval for the Prophet River Extension. Refer to Section 10 for detail; and
- Other miscellaneous sustainment related distribution capital (distribution system integrity) which is forecasted to be \$42 thousand in both 2019 and in 2020.

2

3 14.1 Please provide the last 5 years of 'growth-related distribution capital' capital
4 additions.

5

6 **Response:**

7 The table below shows FEFN's actual "growth-related distribution capital" capital additions for
8 the last five years (2013-2017).

	Actual Capital	Actual Capital	Actual Capital	Actual Capital	Actual Capital
in '000s	Additions	Additions	Additions	Additions	Additions
Fort Nelson	2013	2014	2015	2016	2017
Distribution Growth	21	7	25	25	24

9

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14.2 Did FEFN conduct business case analyses for any of the major capital expenditures?

Response:

No formal business case has been prepared for the proposed capital expenditures. Although some of the projects are of a higher dollar value, none of them are considered “major”, either in nature or in dollar value, in the context of the work that FEI routinely undertakes.

To analyse routine expenditures such as the station upgrades and the steel distribution main replacement projects, FEI employs its Asset Investment Planning tool to identify the risks associated with not undertaking any corrective action. These risks include but are not limited to public safety, employee safety, regulatory compliance and service disruption. By considering the probability and consequence of these risks, the result is an estimation of the value of undertaking the corrective work that can be compared to the value of other proposed work. By doing so, FEI identifies the proposed expenditures of greatest value to proceed with. Although FEFN does not have many planned investments to undertake comparisons, FEI is able to compare the FEFN investments to others within the FEI system to ensure a consistent risk tolerance between FEFN and the rest of the FEI system.

14.2.1 If yes, please provide a brief summary of each including quantification of the costs and benefits.

Response:

Please refer to the response to CEC IR 1.14.2.

14.2.2 If no, please explain why not.

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1

2 **Response:**

3 Please refer to the response to CEC IR 1.14.2.

4

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15. Reference: Exhibit B-1, page 50, 51, 52 and 53

8.4.1 New Deferral Accounts

FEI is proposing to create the following new deferral account for FEFN discussed below.

Table 8-5: Deferral Account Filing Considerations

Item	Consideration	Determination
I.	Indicate if the request is: (a) for a modification or a change in scope to an existing Commission approved regulatory account; or (b) to establish a new regulatory account.	FEI requests the establishment of one new deferral account to capture the costs related to this application and the related regulatory proceeding.
X.	Propose a carrying cost for the balance in the regulatory account and explain why it is appropriate.	Rate base deferral accounts are included in rate base and therefore implicitly financed using the weighted average cost of capital (WACC).

8.4.1.1 2019-2020 Revenue Requirement Application

FEI will incur costs in 2018 and 2019 related to the 2019 and 2020 Revenue Requirements and Rates Application for FEFN estimated at approximately \$70 thousand (on a pre-tax basis). Costs incurred will consist of legal fees, intervener and participant funding costs, Commission costs, required public notifications, miscellaneous facilities, stationery and supplies costs. Consistent with past practice, FEI requests approval to capture the full costs of this Application for FEFN in this rate base deferral account and to amortize these costs over two years, in 2019 and 2020, which represents the period covered by this Application. Any variances between the forecast account balances and the actual incurred costs will be amortized in rates in the following years.

15.1 Please confirm that FEFN is proposing a 'rate base' deferral account.

Response:

FEFN confirms that it is proposing a Rate Base deferral account for the 2019-2020 Revenue Requirement Application costs.

15.2 Are there any other deferral accounts already in existence which could suitably be used instead of creating a new deferral account? Please explain why or why not.

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1

2 **Response:**

3 FEFN currently has no deferral accounts already in existence which could suitably be used
4 instead of creating a new deferral account. The proposed deferral account will capture the
5 specific costs associated with the 2019-2020 Revenue Requirement Application and is
6 requested as a separate deferral account to allow for more transparency in the review and
7 recovery of this regulatory process as the history of the costs is simpler to track and report on.

8 While the 2017-2018 Revenue Requirement Application deferral account has a similar recovery
9 period of two years as the recovery period requested for the 2019-2020 Revenue Requirement
10 Application deferral account, FEI prefers not to re-purpose the account and combine costs from
11 two revenue requirement periods for the reasons mentioned above. Administratively, re-
12 purposing an existing deferral account is similar to opening a new deferral account.

13

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1 **16. Reference: Exhibit B-1, page 58**

FEI expects there will be little to no impact to existing FEFN customers due to the Prophet River Extension and the subsequent capital expenditure. The rate impacts are 0.24 percent in 2019 from the approved 2018 RDA Rates which will then be offset by a decrease of 0.25 percent in 2020. For an average residential customer in FEFN with annual consumption of 125 GJ, the bill impact due to the Prophet River Extension will be an increase of \$1.40 in 2019 and a decrease of \$1.44 in 2020, or a net decrease of \$0.05 over two years. FEI notes the rate impacts account for the additional delivery margin from the additional basic charges to be collected from the 53 residential and six commercial customers after individual meters are installed and they become individual customers of FEFN.

2

3 16.1 Please provide the expected bill impact to FEFN's commercial and industrial
4 customers.

5

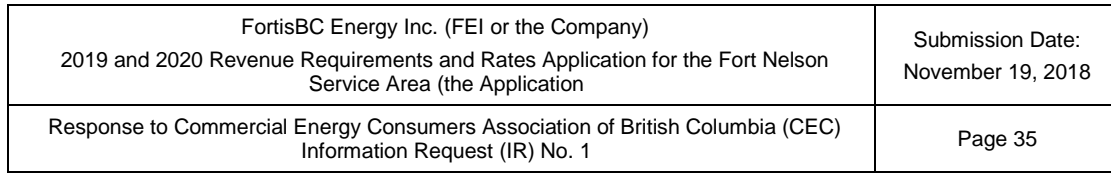
6 **Response:**

7 Please see the table below for the expected bill impact to FEFN's commercial and industrial
8 customers, based on the average Use per Customer (UPC) of each rate class as shown in
9 Section 4.5 of the Application.

	UPC (GJ)	Rate Impact due to PRFN Extension		
		2019	2020	Cumulative
Small Commercial RS 2	350	\$ 4.30	\$ (4.43)	\$ (0.14)
Large Commercial RS 3	3,165	\$ 28.90	\$ (29.82)	\$ (0.92)
Industrial RS 25	41,500	\$ 378.76	\$ (390.84)	\$ (12.08)

10

11



Please refer to the response to BCUC IR 1.16.8 for FEI's estimate of the average utility bill for PRFN residential and commercial customers. Also discussed in the response to the aforementioned BCUC IR, since PRFN currently does not have individual gas meters installed, FEI does not have the historical demand of individual residential and commercial PRFN customers, and therefore is not able to provide the range of utility bills that the PRFN residential and commercial customers can expect to receive.

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1
2 17.2 Please breakdown the \$104 thousand costs for meters, relocating risers, leak
3 surveys and inspections.

4
5 **Response:**

6 Please refer to the response to BCUC IR 1.14.1.

7
8
9
10 17.3 Has FEFN received any feedback from any members of the FEFN regarding the
11 expected change in ownership and requirement to pay utility bills if there is a
12 change in ownership?

13
14 **Response:**

15 FEI assumes the reference above should be to members of the PRFN and not members of the
16 FEFN.

17 Discussions to date have been with PRFN staff and have not included discussion with individual
18 members. Please refer to the response to BCUC IR 1.16.4. PRFN has established that they
19 will disseminate information regarding the change of ownership and resulting effects to
20 individual members directly; and thus far FEI has not received any feedback from individual
21 PRFN members. FEI has provided information to PRFN and has stated its willingness to attend
22 a meeting with band members to provide information and answer questions.

23
24
25
26 17.3.1 If yes, please provide an overview of the commentary that FEFN has
27 received.

28
29 **Response:**

30 Please refer to the response to CEC IR 1.17.3.

31

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1 **18. Reference: Exhibit B-1, page 58 and 61**

10.1 INTRODUCTION

Pursuant to Section 45 and 46 of the UCA, FEI is requesting a CPCN for an extension of FEI's distribution system in FEFN resulting from FEI acquiring 3.2 km of 60 mm polyethylene gas distribution main from the PRFN (the Prophet River Extension). The Prophet River Extension was initiated after PRFN approached and requested that FEI assume ownership and operation of the gas distribution system currently owned by PRFN. The distribution main currently has 53 residential and six commercial properties attached. The acquisition cost is ten dollars plus approximately \$8 thousand in legal fees to complete the acquisition. If the CPCN for the Prophet River Extension is approved, FEI will proceed to install individual gas meters to the 53 residential and six commercial properties. As part of the work, FEI will conduct leak survey and inspection per the standard procedure for pipeline previously not owned by FEI and relocate risers if necessary to fit with the new meters. The estimated capital expenditure for the work is \$104 thousand.

10.5 PERMITTING

The Asset Purchase Agreement will be conditional upon FEI obtaining a right of way permit pursuant to Section 28(2) of the *Indian Act*. The permit will grant FEI the necessary land tenure rights to own, operate and maintain the gas distribution system on the PRFN reserve. FEI will be engaging with the Ministry of Indian Affairs and Northern Development (representing Her Majesty The Queen in Right of Canada) and the PRFN to negotiate acceptable permit terms.

2

3 18.1 Is there any quantifiable value to the right of way permit?

4

5 **Response:**

6 Please refer to the response to BCUC IR 1.15.2.

7

8

9

10 18.1.1 If yes, please quantify.

11

12 **Response:**

13 Please refer to the response to BCUC IR 1.15.2.

14

15

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1
2 18.1.2 Are the costs for engaging with the Ministry of Indian Affairs and
3 Northern Development and the PRFN included in the \$8000 legal fees
4 or the \$104,000 in work?

5
6 **Response:**

7 Please refer to the responses to BCUC IRs 1.15.2 and 1.15.3.
8
9

10
11 18.1.3 If no, please explain why not and provide an estimate of the costs of
12 engagement.
13

14 **Response:**

15 Please refer to the responses to BCUC IRs 1.15.2 and 1.15.3.
16
17

18
19 18.2 Are there any other costs, such as additional administration, that FEFN expects
20 to incur that are not included in the \$8000 legal fees or the \$104,000 in work
21 related expenditures noted above?
22

23 **Response:**

24 The administration costs to create the individual gas accounts once the individual meters are
25 installed will be incurred by FEFN and is not included in the \$8 thousand legal fees or the \$104
26 thousand project costs. These costs are covered by the \$15 Application Charge which will be
27 applied to each of the 59 new accounts once the individual accounts are created. The \$15
28 Application Charge is part of the Standard Fees and Charges Schedule in FEI's General Terms
29 and Conditions (GT&Cs), which applies to FEFN. FEI notes that the Application Charge is
30 applied to all new customer accounts of FEI, including FEFN, and is not specific to PRFN.

31
32

33
34 18.2.1 If yes, please quantify.
35

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1 **Response:**

2 Please refer to the response to CEC IR 1.18.2.

3

4

5

6 18.3 Please confirm that FEI's estimate of \$104,000 for the estimated capital
7 expenditure was not developed to a class 3 estimate, but is based on FEFN's
8 own experience and knowledge of costs.

9

10 **Response:**

11 Confirmed. As shown in FEI's response to BCUC IR 1.14.1, the capital expenditure is
12 predominantly meter hardware, meter installation, riser relocation, and mains survey/inspection.
13 This type of work is part of FEI's regular operations and FEI has extensive experience and
14 knowledge of costs related to this work.

15

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1 **19. Reference: Exhibit B-1, page 61**

2 **10.6 JUSTIFICATION**

3 **10.6.1 Alternatives**

4 The purchase of the PRFN gas distribution system is a single-option transaction. Therefore, a
5 comparison of different alternatives, along with a related discussion of the costs, benefits, and
6 financial analysis has not been included.

7

8 19.1 Please confirm that FEFN does have the option of declining the purchase.

9

10 **Response:**

11 The Asset Purchase Agreement contains a number of subject conditions in favour of FEI,
12 meaning FEI has the option of declining the purchase in the event that the subject conditions
13 are not met or FEI chooses not to waive the subject conditions on or before the Closing Date.
14 These subject conditions include, but are not limited to, no adverse change to the condition of
15 the Assets that FEI considers material, FEI entering into a Section 28(2) permit with PRFN and
16 Canada on terms satisfactory to FEI, BCUC approval of the transaction, and there not being any
17 material adverse change in the purchased assets between the time the Asset Purchase
18 Agreement is signed and the completion date of the transaction.

19

20

21

22 19.2 Does FEFN believe that there could be risks or benefits of declining the purchase
23 that are not laid out in the current application, such as straining relations with
24 PRFN or others?

25

26 **Response:**

27 FEI has proposed the purchase knowing that it is the desire of the PRFN that the transaction
28 proceed. If the purchase does not proceed for any of the reasons listed in the subject
29 conditions contained in the Asset Purchase Agreement which are discussed in response to CEC
30 IR 1.19.1, it will be because of factors outside of FEI's control. Therefore, FEI does not expect
31 relationships to be strained.

32

33

34 19.2.1 If yes, please discuss and provide quantification of any potential costs
35 or benefits if available.

36

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1 **Response:**

2 Please refer to the response to CEC IR 1.19.2.

3

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1 **20. Reference: Exhibit B-1, page 62**

Table 10-1 below summarizes the incremental cost of service in 2019 and 2020 when compared to the approved 2018 revenue requirements, the offsetting delivery revenues from PRFN as a result of the additional basic charges to be collected from the individual customers instead of just one large commercial customer, and the rate impact to FEFN in 2019 and 2020. For an average residential customer in FEFN with annual consumption of 125 GJ, the bill impact due to the project will be an increase of \$1.40 in 2019 and a decrease of \$1.44 in 2020, or a net decrease of \$0.05 over two years.

Table 10-1: Summary of Financial Analysis and Rate Impact of PRFN Project^{30,31}

	2019	2020
Incremental Annual Revenue Requirement (\$)	9,674	14,279
Offsetting Additional Revenue from PRFN (\$)	(3,622)	(14,487)
Net Incremental Annual Revenue Requirement (\$)	6,052	(208)
2018 Approved Revenue Requirement (G-196-17), (\$000s)	2,489	2,489
Rate Impact (%) to Approved 2018 Rates	0.24%	(0.01%)
Rate Impact (%), Year-to-Year	0.24%	(0.25%)

The rate impacts indicated above do not account for the potential growth in PRFN as discussed in Section 10.6.3 below. Based on the preliminary expansion plans from PRFN, FEI believes that the acquisition provides the potential for additional revenue to FEFN which will have a positive impact on rates.

2

10.6.3 Benefits to PRFN

The primary reason that PRFN is requesting that FEI assume ownership and operation of its existing gas distribution system is because PRFN expressed they have no ability or resources

to maintain the existing distribution system while expanding it for their planned growth. PRFN wants to ensure safe and reliable natural gas service is continued to be provided to its members and expand the system in accordance to safety standard.

PRFN indicated to FEI that they plan to expand their community in the near future, including new restaurants, hotels/motels, convenience stores and other retail spaces, a church, a Fire Hall and subdivision housings for PRFN members. PRFN expressed they would have no ability or resources to expand the existing gas distribution system to accommodate the anticipated growth in PRFN. Based on these preliminary expansion plans from PRFN, FEI believes that the acquisition provides the potential for additional revenue to FEFN and which would have a positive impact on rates. This will also benefit existing customers in FEFN which will also see the positive impact on rates due to the potential growth.

3

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20.1 Please provide quantification for the expected anticipated growth of PRFN over the next 5 to 10 years.

Response:

FEI can only quantify the anticipated growth of PRFN over the next 5 to 10 years based on what PRFN has communicated to FEI, which is described in the preamble to this question. Until more information is available, such as size of each property, types of building and construction, number of appliances, etc., FEI cannot accurately forecast the cost to expand the existing distribution system.

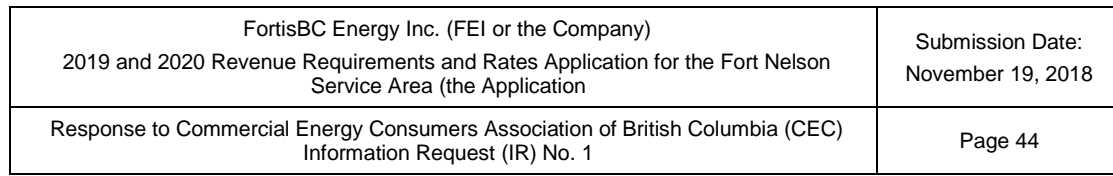
Future customers and developments that wish to have natural gas service from FEI will be subject to the same service line and/or main extension (MX) test as new customers and developments in FEI. Therefore, the potential risk to FEFN's existing customers from future growth of PRFN should be minimal.

All things being equal, additional demand from new growth generally decreases the rates as existing fixed infrastructure costs are spread over larger billing determinants. Therefore, the anticipated growth from PRFN should benefit FEFN existing customers.

20.2 Please quantify the costs FEFN is likely to experience to meet the anticipated growth over the next 5 to 10 years, or provide costs based on various reasonable scenarios that might occur.

Response:

Please refer to the response to CEC IR 1.20.1.



10.6.4 No Detrimental Effect to Existing Users of PRFN Gas Distribution System

As discussed in the previous section, although the Project will result in PRFN's members being responsible for their own natural gas bill as a result of this transaction, PRFN also agreed to backstop payment should its members fail to make payment to FEFN.

Response:

Please refer to the responses to BCUC IRs 1.16.4 and 1.16.6.

1 **22. Reference: Exhibit B-1, page 63**

10.6.5 Risk Associated with the Prophet River Extension

FEI considers the following risks associated with the Prophet River Extension:

- The acquisition is dependent on FEFN successfully obtaining the right of way pursuant to Section 28(2) of the *Indian Act* as discussed in Section 8.8.3.2. FEFN is already engaged in negotiations with Ministry of Indian Affairs and Northern Development (representing Her Majesty The Queen in Right of Canada). PRFN will also be involved in permit negotiations; and
- The actual condition of the existing distribution system currently owned by PRFN. FEI considers the risk of this is small based on the history of the pipeline and FEI's

observations of the system which is in generally good condition. Furthermore, the pipeline is made of polyethylene which does not have the concern of cathodic protection like steel pipe. The distribution system was installed by BC Gas (predecessor of FEI) in 1989 following BC Gas' safety standards at that time. Over the years, FEI has been providing service from FEFN to PRFN regularly for any new installation to the existing distribution system as well as responding emergency calls and repairs such as leak detection from PRFN. Therefore, the risk of a long term leak that has been undetected over the years is small. FEI is also aware of the work within PRFN that might have an impact to the pipeline and is generally comfortable with the condition of the system. As standard practice, FEFN is planning to conduct a leak survey and inspection once the system is acquired by FEI. Given the distribution main currently owned by PRFN is 29 years old and distribution mains (currently owned by FEI) typically have an estimated life of approximately 65 years, FEI considers the risk related to pipe condition is acceptable.

22.1 Please provide a range of risk with associated dollar values regarding the actual condition of the existing distribution system currently owned by PRFN.

Response:

Please refer to the response to BCUC IR 1.14.6.